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ABSTRACT

The general development of the concept of self-esteem is reviewed, and concerns about the research strategies and issues are discussed. This paper focuses on adolescent self-esteem. Research is presented on global self-esteem, domain specific self-esteem as it relates to global self-esteem, and the identification of self-esteem trajectories. Overall, the studies support the idea that the period of adolescence is rather stable in regard to self-esteem; however, there are some fluctuations in self-esteem scores especially for females and young adolescents making transitions. Global self-esteem is shown to be a separate but related entity to domain specific self-esteem. Also the identification of self-esteem trajectories demonstrates that adolescent self-esteem does not follow one pattern of development. Studies involving diverse populations are now pointing to individual differences in self-competencies and how these contribute to overall self-esteem. The improvements of self-esteem research in the past two decades have created many interesting and relevant paths to follow. The paper concludes with a summary of findings and implications for clinical practice and future research. (EMK)

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A REVIEW OF THE CURRENT LITERATURE REGARDING GLOBAL SELF-ESTEEM AND SPECIFIC SELF-ESTEEM IN ADOLESCENT DEVELOPMENT

by

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A REVIEW OF THE CURRENT LITERATURE REGARDING GLOBAL SELF-ESTEEM AND SPECIFIC SELF-ESTEEM IN ADOLESCENT DEVELOPMENT

A Doctoral Research Paper

Presented to

the Faculty of the Rosemead School of Psychology

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Psychology

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by

Sherri L. Kidder

December, 1998

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ABSTRACT

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Research is presented on global self-esteem, domain specific self-esteem as it relates to global self-esteem, and the identification of self-esteem trajectories. Overall, the studies demonstrated that the period of adolescence is rather stable in regard to global self-esteem. However, there are some fluctuations in self-esteem scores especially for females and young adolescents making transitions. Global self-esteem was shown to be a separate but related entity to domain specific self-esteem. Also the identification of self-esteem trajectories demonstrated that adolescent self-esteem does not follow one pattern of development. The paper concludes with a summary of findings and implications for clinical practice and future research.

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A REVIEW OF THE CURRENT LITERATURE REGARDING GLOBAL SELF-ESTEEM AND SPECIFIC SELF-ESTEEM IN ADOLESCENT DEVELOPMENT

Introduction

The concept of self-esteem has achieved greater significance in the past several years as sociologists, psychologists, and other researchers have begun to understand the role that self-esteem plays both in individual and societal problems. The concept of self-esteem initially emerged in the 1800s. The first major landmark in understanding self-esteem was contributed by William James. In Principles of Psychology (1890), James concluded that human aspirations and values play an essential role in determining how we regard ourselves. He resolved that self-esteem has to do with attaining a general worth from standards of success and status within the community and is influenced by the totality of all that an individual has attained regarding family, health, employment and material possessions. James concluded that "Self-esteem = Successes/Pretensions" (p. 296). Shortly after James, Cooley (1902) purported that self-esteem was a social construction that is socially determined. That is, an individual takes in and becomes or reflects how others view him.

Following the writings of James and Cooley, self-esteem was not a significant focus until the mid-1900s. In 1965, Morris Rosenberg made a major contribution to the study of self-esteem by providing a measure of self-esteem and the definition that "by self-esteem we refer to the evaluation which the individual makes and customarily maintains with regard to himself: it expresses an attitude of approval or disapproval" (p. 65). This definition includes the idea that self-esteem has both affective and cognitive aspects as well as an evaluative component.

Shortly thereafter, Stanley Coopersmith (1967) conducted extensive research on child self-esteem and provided the following definition for self-esteem:

> The extent to which the individual believes himself to be capable, significant, successful, and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds toward himself. It is a subjective experience which the individual conveys to others by verbal reports and other overt expressive behavior. (p. 5)

Coopersmith's work added the dimension that self-esteem is a subjective experience of personal worth or value which is expressed through one's actions and is, therefore, observable and measurable.

Coopersmith (1967) concluded that there are four major factors contributing to the development and enhancement of self-esteem. The first factor is the amount of respect, acceptance, and care an individual receives from significant others. Another factor is the record of success and personal status one has attained. The third factor is that one's own values and goals determine which elements and experiences influences one's self-esteem. The fourth and final factor is how a person experiences a negative event and whether he distorts or minimizes the situation to negate its impact on self-esteem or take it in and feel intense judgment that would threaten self-esteem.

Coopersmith (1902) and Rosenberg (1890) built the foundation for the current understanding of self-esteem, and most studies begin by citing one of these researchers. Over time, a few elements of the definition have been adjusted, but most definitions continue to incorporate the same essential components. Following their work, research in the area of self-esteem expanded and has taken a prominent role both in psychology and in society. The societal belief that self-esteem is significantly related to personal satisfaction, effective functioning, and psychological well-being has become well established and is apparent in

numerous articles and books addressing self-esteem development and enhancement. Similarly, individuals often seek psychological help to improve self-esteem and deal with feelings of inadequacy and low self worth. In short, one may conclude that positive self-esteem is both desired and essential for psychological survival. Covington (1984) and Maslow (1970) have suggested the existence of a universal human desire to protect and enhance one's self-worth.

Self-esteem Development in Adolescents

Self-esteem development begins in infancy and continues throughout childhood. Coopersmith (1967) linked the contributions to self-esteem to patterns of child rearing and found that 10 to 12-year-old boys with high self-esteem came from homes where the parents provided firm control, promoted high standards of behavior, encouraged independence, and were willing to reason with their children. According to Coopersmith "this is success in its most personal expression-the concern, attention, and time of significant others" (p. 179).

Childhood is a crucial time period for the development of self-esteem since the foundation for later years is molded at a young age. However, as Demo (1985) suggested, self-esteem is viewed as "a fluctuating self-attitude that most often resembles a baseline or standard self-evaluation, but that also encounters situational fluctuations from this baseline as a function of changing roles, expectations, performances, responses from others, and other situational

characteristics" (p.1491). In other words, self-esteem is not immutable in the years following childhood.

According to Block and Robins (1993), self-esteem development is an intricate process:

> Development proceeds through a complex process that involves the mutual influences of a person's innate characteristics, family experiences, peer interactions, social roles, cultural environment, and the fortuities that impinge upon a life. It is during adolescence that the biosocial transition from childhood to adulthood occurs, is experienced, and further influences development. (p. 909)

Adolescence, the developmental period of transition from dependent childhood to self-sufficient adulthood, is characterized by the onset of puberty, with changes in physical, mental, and social abilities. Furthermore, it includes the transition from elementary school to junior and senior high school, an increase in peer involvement, and independence, with the decisions and demands of adulthood quickly approaching.

Numerous studies have noted that the adolescent phase of development is filled with adjustments and that self-esteem is highly correlated to outcomes. Low

self-esteem has been associated with teenage pregnancy (Keddi, 1992), depression (Harter, 1986), delinquency (Rosenberg, Schooler, & Schoenbach, 1989), substance abuse (Stacy, Newcomb, & Bentler, 1992), poor academic achievement (Hawkins, Catalno, & Miller, 1992), and maladjustment in social relations (Harter, 1993). Whereas high self-esteem has been associated with higher scores on vocational interest tests (Mullis & Mullis 1997), adolescent parenting skills knowledge (Hurlburt, Culp, Jambunathan, & Butler, 1997), academic success (O'Malley & Bachman, 1979), perceived intimacy with parents (Blyth & Traeger, 1988), and satisfaction and happiness in later life (Harter, 1993).

Previously the period of adolescence was viewed as a time of "storm and stress" or as a time when the individual is confronted with drives and needs that lead to dramatic changes in one's self concept (Hall, 1904). However, the last few decades of empirical research have demonstrated that the adolescent phase of development may not be filled with chaos and disruption, but may instead be a period of continuous development (Dusek & Flaherty, 1981). Offer, Osterov, and Howard (1981) conducted several studies and determined that their findings allowed them to view teenagers "as feeling confident, happy, and self-satisfied--a portrait of the American Adolescent that contrasts sharply with that drawn by many theorists of adolescent development, who contend that adolescence is pervaded with turmoil, dramatic mood swings, and rebellion" (pp. 83-84). The

results of these and other studies were the beginning of a new conceptualization for adolescent development and the opportunity for different directions of research.

This paper reviews current findings in the area of adolescent self-esteem research. The goal of this review is to gain understanding in regard to adolescent global and domain specific self-esteem and to determine what type of change happens, at what time, and what factors influence these processes. Following a presentation of the general concerns regarding self-esteem research, current research in global self-esteem, domain specific self-esteem, and identifying self-esteem trajectories will be discussed. Domain specific self-esteem has expanded in many directions; however, the focus of this paper is on domain specific self-esteem as it relates to and differs from global self-esteem. Finally the paper concludes with a summary of current findings regarding self-esteem and the implications for clinical practice and future research.

General Concerns About Current Research

Wylie (1979) conducted a major review of research on adolescent self-esteem and summarized the studies that followed methodological standards of design and measurement. She concluded, "whatever the state of theorizing about overall self-regard as a function of age, the bulk of the studies . . . show no

association of age and self-regard scores" (p. 21). She also suggested that results may have been influenced by poor methodology. A few of the concerns she noted, as well as some others, are still prevalent in the literature today.

Sample and Study Design

Group size was either small or very large. Some correlations were based on fewer than 100 participants, and analysis of variance (ANOVA) was often computed with cells of less than 15 participants, minimizing the ability to discuss interaction effects. Other samples were so large that significant effects were likely to be found and lower significance levels should have been used (Wylie, 1979).

Wylie (1979) mentioned that cross-sectional studies often omitted information required to determine whether age groups were comparable. In some studies, researchers failed to mention whether any age group had recently made significant transitions to junior or senior high schools, which could effect results. Wylie also suspected that some longitudinal designs may have revealed effects that were due to participant attrition and that repeated testing procedures were not analyzed. Again, this concern continues to limit the usefulness of research findings.

Instruments Used

Wylie (1979) noted that instruments used for measurement were often not well documented or known in past research, thereby, limiting the ability to

evaluate them and interpret scores. In current studies, some researchers chose well-known measures but modified the scales, which could have impacted previously determined reliability and validity estimates. Measures that have been noted as inappropriate for global self-esteem are still being used. Wylie (1979) noted that the Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1969) and the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) were not founded on a sound theoretical basis, their summation of various domains to achieve an overall global self-esteem score was inadequate, and they failed to include descriptive as well as evaluative judgments. Bogan (1988) reported that replication studies on these measures have continued to be inconsistent. As such, the Coopersmith Self-Esteem Inventory and the Piers-Harris Children Self-Concept Scale are no longer recommended as measures of global self-esteem (Harter, 1983; Wylie, 1974).

Another concern found in current studies is that scores were often based on a small number of items using a small Likert scale range. As participants grow older, possible ceiling effects may nullify results. Furthermore, scales used across the age span may not fully cover relevant specific domains contributing to self-esteem during that developmental phase (Harter, 1988). Finally, all the measures used are self-reports. Savin-Williams and Jaquish (1981) suggested that self-report measures may not fully measure actual self-esteem and may be unduly influenced

by other variables (e.g., desire to look good, guessing). Similarly, self-reports may reflect attitudes rather than realities. None of the current studies utilized peer or adult observer ratings.

Research on the Stability of Adolescent Global Self-Esteem

Prior to discussing current research findings, it will be beneficial to report on the most commonly used measure for global self-esteem. The Rosenberg Self-Esteem Scale is a recommended, relatively simple, and thorough self-report measure demonstrating good reliability and validity (Chiu, 1988; Rosenberg, 1979; Wylie, 1974). The Rosenberg Self-Esteem Scale items are measured on a 4-point Likert scale and focus on global evaluation of self-worth. Hagborg (1993b) suggested that the construct validity of the Rosenberg Self-Esteem Scale was supported by its relation to Harter's (1988) Self Perception for Adolescents Global Self-Worth Subscale. Marsh (1996) demonstrated that the (+) and (-) factors of the Rosenberg Self-Esteem Scale are measuring the same global construct. The Rosenberg Self-Esteem Scale has also demonstrated strong test-retest reliabilities of .85 and .88 (Rosenberg, 1965).

Previous Findings on the Stability of Adolescent Global Self-Esteem

Wylie's 1979 review concluded that self-esteem was not significantly influenced by either age or gender. Later studies (Abramowitz, Petersen, &

Schulenberg, 1984; Hirsch & Rapkin, 1987; McCarthy & Hoge 1982; Nottelman, 1987; O'Malley & Bachman 1983; Savin-Williams & Demo, 1984) demonstrated an overall increase in global self-esteem during adolescence and that Wylie's review was misleading. As the quality of methodology has improved, researchers have continued to address questions of stability; however, the focus has turned towards understanding what type of change is happening, at what time, and what factors (e.g., gender, transitions, personality variables) influence this process.

Stability With Regard to Age and Gender

In 1997, Chubb, Fertman, and Ross conducted a study to address the development of self-esteem in regard to age and gender. Data were used from a previous study. All participants were from the same school district that served a small working-class town, a middle class area, and a rural area. Beginning in 1989, a ninth-grade cohort (236 students) was followed for 4 years. Only 174 students were used in the final analysis since they had completed all 4 consecutive years. The first year, students were in junior high school. Demographical information was provided, including ethnicity (95% Caucasian), gender (41% male, 59% female), and number of parents in the home (78% with 2 parents, 14% with 1 parent, 8% with someone other than parent).

Data were collected by trained staff members during regular school hours. Measures included the Rosenberg Self-Esteem Scale and the Nowicki-Strickland

Locus of Control Scale for Children. The authors refer to Nowicki and Duke (1983) and Robinson and Shaver (1973) for a summary of reliability and validity information (Chubb et al., 1997).

A two-way analysis of variance (ANOVA) was used for gender and grade and demonstrated a significant main effect for gender (F [1,174] = 10.76, p < .001), but not for grade. Male self-esteem was consistently higher by approximately two points over the 4 years. There was no significant interaction effect between gender and grade. Similarly, a two-way ANOVA was used to examine gender and locus of control. A significant main effect was found for grade (p < .001) and a significant interaction effect for gender and grade (p < .05). Locus of control became less external with time except from 9th to 10th grade, when males increased in externality and females increased in internality (Chubb et al., 1997).

Chubb et al. (1997) provided good demographical data (i.e., geographical location, ethnicity, socioeconomic status, and family constellation) with adequate numbers of females and males to assess gender differences. Also longitudinal, rather than cross-sectional measures, allowed for a more accurate measure of change. The authors selection of the Rosenberg Self-Esteem Scale to measure global self-esteem was appropriate; however, they did not report the internal reliability of the Rosenberg Self-Esteem Scale during this study.

Two limitations of the Chubb et al. (1997) study were the geographic location and ethnic diversity. Also, the attrition rate (25%), was explained but not analyzed, and those students who dropped out of school or did not complete certain questions may represent a group whose self-esteem differs from the average. Finally, participants experienced a transition to a different school for junior high and a non transition comparison group was not assessed to determine possible effects due to the transition.

A similar study, conducted by Bagley, Bolitho, and Bertrand (1997), examined global self-esteem development among a Canadian population. Their sample consisted of participants, grouped by ages of 12 to 13 years, 14 to 15 years, 16 to 17 years, and 18 to 19 years, from a previous study conducted in 1993. Participants were chosen by stratified random sampling of nine school districts (public and private) representing all areas in Alberta, Canada (1,084 males; 1,024 females). To measure global self-esteem, the Rosenberg Self-Esteem Scale was used and demonstrated alphas from .85 to .90. Other measures included the General Functioning subscale from the McMaster Family Assessment Device (alpha = .90; Epstein, Baldwin, & Bishop, 1983), a questionnaire devised for use in this study measuring perceived attitudes of faculty and students in the school (alpha = .78), and a measure of personal adjustment.

Principal component analysis for each age and gender demonstrated one major general factor. T-tests revealed that females aged 14 to 17 years had significantly lower self-esteem scores than females aged 12 to 13 years and aged 18 to 19 years ($p < .05$). For each age group, females had lowers scores than males ($p < .01$). For both males and females aged 12 to 17 years, self-esteem significantly correlated with the measure of family relationship and measures of personal adjustment ($p < .01$). Specifically, the Emotional Disorder subscale demonstrated negative correlations with high self-esteem ranging from .50 to .66. For girls, sexual and physical victimization in school related to self-esteem, and for boys, physical victimization in school related to self-esteem ($p < .01$). School Climate produced smaller significant correlations.

The results found by Bagley et al. (1997) were based on a large and diverse population of adolescents. Furthermore, they came from reliable and valid measures. This work provided cross-cultural validation for the Rosenberg Self-Esteem Scale as well as norms for Canadian populations, and it added to the base of accumulating data on how family and personal adjustment correlate with self-esteem. The results demonstrated again that females score lower than males on global self-esteem. However, it also showed that a large group of females aged 14 to 17 years had lower scores than younger and older females (Bagley et al., 1997).

One influence on this result, found by Bagley et al. (1997), may have been the difference in subsample size. There were only 69 participants in the age 18 to 19 years category, whereas other groups included over 220 participants. Also, this study was cross-sectional in design and may have been influenced by cohort effects. Nevertheless, the significant difference between the groups still raises questions regarding female self-esteem development that need to be addressed in future studies.

A study conducted by Mullis, Mullis, and Normandin (1992) addressed the development of self-esteem and the mediational effects of social class and gender on self-esteem. The study included 1,178 students who were randomly selected from rural and urban regions from a Midwest state. The cross-sectional design included approximately equal number of 9th, 10th, and 11th-graders. The 9th graders were tested consecutively for 3 years for this longitudinal study ($\underline{N}$ = 270, males $\underline{n}$ = 140). It should be noted the authors stated at one point that "there were roughly equal numbers of students from 9th, 10th, and 11th grades" (p. 53). At later points, they stated that "instruments were administered to approximately equal numbers of students in each of four grades (9, 10, 11, 12)" (p. 53) and that "analysis of variance was performed on the self-esteem scores of high school students in grades 9-12" (p. 54). Despite repeated mention of grade 12, no results were reported for this grade (Mullis et al., 1992).

The study indicated that, from the first 9th grade testing (n = 451), only 270 students were tested consecutively for the next 3 years. This may suggest an attrition rate close to 67%, or it may suggest, that based on some unstated criteria, the sample was cut in half. Nevertheless, no explanation was offered other than "only students who had completed all 3 years of the study constituted the longitudinal sample" (Mullis et al., 1992, p. 53).

Students were tested in the spring of each year, and the 9th graders were again tested in the spring of each subsequent year. Family income, parent occupation, and education were used to determine socioeconomic status of adolescents and was obtained by self-report of the adolescent. Selected personnel administered the Self-Esteem Inventory as a measure of global self-esteem. However, as stated previously the Self-Esteem Inventory is no longer considered to be an adequate measure of global self-esteem (Mullis et al., 1992).

The authors report completing a two (year) by three (grade) ANOVA with the cross sectional data. However, it is unclear what constituted the analysis in the second year. The cross-sectional study was earlier reported to cover only the first year. They stated no significant difference was found between grades. An ANOVA with a repeated-measures design was used with the longitudinal data to determine a difference in self-esteem scores, and a significant effect was found (F [2,807] = 6.52, $p < .002$). However, the authors did not report exactly which

means were more significant. A spilt plot ANOVA was also used to identify self-esteem differences as a function of gender and socioeconomic status over 3 years. No significant effect was found for gender as a main effect or as an interaction with grade. Of the five factors used for socioeconomic status, only family income showed a significant relationship to self-esteem over the 3 years (F [2,260] = 4.64, $p < .01$; Mullis et al., 1992).

Overall, Mullis et al. (1992) concluded that "grade level was found to be significantly related to self-esteem in the longitudinal but not the cross-sectional design" and "the mediational effects of gender and socioeconomic status were found to be minimal" (p.51). Despite demonstrating results similar to other studies, the numerous concerns and questions raised above require the results of this study to be considered with caution.

Stability With Regard to Personality Correlates and Time Intervals

In an effort to provide further understanding, Block and Robins (1993) conducted a study to assess mean level changes by age, consistency of ordering in groups, and consistency of personality correlates of self-esteem with regard to gender differences. They described self-esteem as "the extent to which one perceives oneself as relatively close to being the person one wants to be and/or as relatively distant from being the kind of person one does not want to be, with respect to person-qualities one positively and negatively self values" (p. 911).

Participants were part of a different longitudinal study that was initiated in 1968, which followed 128 children across development. Of the 104 participants who completed the original study, 91 (44 males, approximately 66% White, 25% African-American, and 5% Asian-American), based on complete data sets, were used in the current study. Participants were from urban areas and were heterogeneous with respect to social class and parental level of education. There were no trends towards correlation between socioeconomic status or ethnicity. The participants in this study were tested during the first and last year of high school and again 5 years later (Block & Robins, 1993).

At each phase participants described themselves, and one week later the person they would ideally like to be using the 43-item Self-Descriptive Q-Set (Block & Block, 1980). The self-esteem score was derived from the correlation between the perceived and ideal self. Reliability estimates were computed separately for males and females at each phase (males' scores ranged from .56 to .75, females' scores ranged from .81 to .83). Personality measurements were completed by four psychologists who interacted with each participant and then rated the individual using the California Adult Q-set (Block, 1978). The internal consistency between raters were .72, .59 and .70 for each phase, respectively. Block and Robins cited previous literature in support of this measure as a useful and valid technique for personality description (Block & Robins, 1993).

No age-related mean changes were observed. However, males tended to have higher self-esteem scores than females at each phase, with a significant difference at the last phase ($p < .005$). In addressing individual change, they found that 34% of the males' scores decreased in self-esteem, and 64% increased. 57% of the females' scores decreased, and 43% increased. In longitudinal consistency, with correlations corrected for measurement error, over 4 years, females and males were similar (females $r = .57$, males $r = .63$). Over 9 years, females tended to demonstrate greater ordering consistency ($r = .65$) than males ($r = .36$; Block & Robins 1993).

To examine personality correlates of self-esteem change, Block and Robins (1993) regressed self-esteem at age 14 years onto self-esteem at age 23 years and retained the residual as a change index. The index scores for males had a reliability of .70, and for females .71. These scores were then correlated with the California Adult Q-set score obtained at age 14 years to determine what qualities correlated with increases in self-esteem. Significant ($p < .05$) positive female qualities included moralistic, protective, humorous, sympathetic, and generous; and for males, calm, relaxed, not socially anxious, and satisfaction with self.

Next Block and Robins (1993) addressed whether qualities of high self-esteem at one age are the same as qualities of high self-esteem at another age by correlating self-esteem scores at each age with its concurrent California Adult Q-

set score. These scores were then correlated to estimate congruence. For the female sample, they found similarities: ages 14 and 18 years (r = .67), ages 18 and 23 years (r = .68), and ages 14 to 23 years (r = .81). The scores for males, however, were not as congruent: ages 14 and 18 years (r = .19), ages 14 and 23 years (r = .14), and ages 18 to 23 years (r = .69). This suggests that personality profiles of females may be more well established coming into adolescence, whereas for males, a high self-esteem profile at age 14 years is very dissimilar to that of a high self-esteem profile at age 23 years.

Finally, Block and Robins (1993) evaluated gender similarities of personality patterns and found that initial patterns were not related (r = -.05), but by age 18 years (r =.41) and 23 years (r = .76) male and female personality patterns became more similar. This study demonstrated that the average individual did not change, nor did the ordering consistency of participants after a few years. Individual male demonstrated significantly higher self-esteem than females, and the majority of males increased their self-esteem scores by more than one-half standard deviation, but female scores tended to decrease. They also found that the personality correlates of self-esteem were different for gender as male personality correlates changed with time and female personality correlates remained stable.

One concern with Block & Robin's (1993) research was that the sample size was small for correlational statistics. It did, however, include comparable

numbers of males and females. Generalizability was limited because participants were all from the same original preschool in one community. Furthermore, external validity was also questionable in that data was collected from adolescents in the early 1980s whose self-esteem development may be dissimilar to adolescents in the 1990s considering the new found importance of enhancing a child's self-esteem and the social changes that have taken place for women.

Block and Robins (1993) appropriately selected the Q-sort to use in the study because it allowed for a measure of congruence between the ideal and perceived self which fits the authors definition of self-esteem. Furthermore, this measure has adequate reliability. Also, Block and Robins suggested that the Q-sort is more difficult to manipulate so it minimizes effects due to the desire to look good. Moreover, it allows for the salience of each item to be evaluated in comparison to each other item. They also suggested that because it identifies both the self and the ideal self it makes the estimate of self-esteem more centered within the individual. However, one concern is that there may have been test-retest effects when measuring the congruence between the self/ideal congruence with only a 1-week interval.

Block and Robins (1993) more than adequately analyzed gender differences using three different tests of significance. Computing corrected correlations to analyze consistency was appropriate and allowed for cross

comparisons with other studies. However, these correlations only demonstrated a change in order, and not how the individuals themselves changed. Correlations between male and female personality correlates and self-esteem facilitated identifying differences in gender and provided useful information to the effort to understand self-esteem development.

Alasker and Olweus (1992) defined self-concept as "an organization of mostly evaluative representations and beliefs about oneself as a person in terms of characteristics, behaviors, feelings, and thoughts" (p. 124). They hypothesized that stability coefficients for a fixed time interval would be lower for younger participants and that the stability would be impacted by ages and possibly by gender.

Data were collected from four large samples of school children living in Bergen, Norway. Twenty-eight primary schools and 14 junior high schools were included. One hundred twelve classes of students were randomly selected. Students were followed for 2 1/2 years and measures were taken in May, 1983, May, 1984, May, 1985, and October, 1985. Samples included students divided by gender in grades 4, 5, 6, and 7. The modal age was determined for each grade (Alasker & Olweus, 1992).

The Global Negative Self-Evaluation Scale was used to measure self-esteem. The Global Negative Self-Evaluation Scale is a six-item, 6-point Likert

scale based mainly on the Rosenberg Self-Esteem Scale, but is more appropriate for younger ages. In previous work (Alasker & Olweus, 1986), the Global Negative Self-Evaluation Scale has demonstrated internal consistency and validity. In this study, internal consistency coefficients ranged from .72 to .92 (Alasker & Olweus, 1992).

Valid questionnaires were obtained from 2,473 participants at the initial testing (94.9% of overall sample). From this group, valid questionnaires were obtained from 86.5%, 70.6%, and 59.8%, respectively, for each testing. The last year, scores dropped significantly due to the fact that those participants starting in May of 1983, who were in the 7th grade, had completed compulsory education. Also, new students moving into each of the schools were allowed to join the study. As such, the number of participants for each test/retest period varies.

Correlations were then determined for each test-retest period, with intervals of .42, 1, 2, and 2.42 years. These correlations, or stability coefficients, were then corrected in order to compare them with coefficients of varying reliability. They found a trend for stability to decrease as time grew longer. For an interval of .42 years, $\underline{r} = .70$. For 1 year, 2 years, and 2.42 years the average raw stability coefficients were .60, .44, and .42, respectively. Regression equations demonstrated that stability of female scores decreased more rapidly than stability of male scores. For age, male stability coefficients tended to increase with age

($\underline{r}$ = .67), whereas female scores tended to be less stable ($\underline{r}$ = .59). In age specific effects, males did not differ; however, females who were 13 years old at Time 1 showed lower stability coefficients compared to females of different ages across small intervals (Alasker & Olweus, 1992).

To determine the extent to which stability could be predicted on the basis of information available, a series of regression analyses were carried out with time interval, age, sex, and the interactions thereof as predictors. The order of interval, age, sex, and interaction of Sex with Time accounted for 72% of the variance in the corrected stability coefficients (Alasker & Olweus, 1992).

Alasker and Olweus (1992) then examined previous research and found studies that were comparable to their own, based on instruments, sample size, time interval between tests, ages at first time of measurement, and results reported in terms of correlation coefficients. They found very similar results in regard to slope, standard error of estimate and correlations between stability coefficient and time interval. Predicted stability coefficients were somewhat lower. Based on these results Alasker and Olweus (1992) made two conclusions:

> Results indicate that, for a given time interval, the size of the stability coefficient for global self-esteem tends to increase with age, within ranges

represented in the data. There is also some indication that the relationship may be somewhat stronger for males than for females. (p. 141)

Alasker and Olweus (1992) report that the sample is representative of students in Bergen, Norway; however, no demographics were reported. The sample size was very large and may have increased the likelihood of finding significant results. Also, the attrition rate was moderately explained, but not analyzed. The instrument used demonstrated good internal consistency and was previously demonstrated to be a valid measure. The correlations between testing periods demonstrated consistency in the degree of ordering of individuals. However, there was still a large amount of unaccounted for variance. Corrected coefficients allowed their results to be compared with studies of children from different cultural backgrounds.

Stability With Regard to School Transitions

Proctor and Choi (1994) examined the stability of self-esteem by conducting a study to determine whether children experienced a change in self-esteem or perceived competence as a result of the transition to junior high school and whether these transitional effects vary with ability or gender. The study involved 112 (61 males) white middle-class students from one school district in a

midwestern college community who were making the transition from various elementary schools to the same junior high. Attrition appeared to be minimal.

Students were divided into four levels of ability (low average, average, high average, superior) according to scores on the Otis-Lennon School Ability Test, which had been previously administered that year for school records. In May of the sixth grade and November of the seventh grade, the Piers-Harris Children's Self-Concept Scale-Revised (Piers, 1984) was used to measure self-esteem, and the Perceived Competence Scale for Children (Harter, 1982) was used to measure Cognitive, Social, and Physical Competence, as well as General Self-Worth (Proctor & Choi, 1994).

Correlated t tests were used to examine the difference between means at Time 1 and Time 2. A significant difference ($p < .001$) was found for self-esteem, with the means increasing from Time 1 to Time 2. Likewise, a significant increase was found on the domains of Social Competence ($p < .02$), Physical Competence ($p < .001$), and General Self-Worth ($p < .01$). The mean difference for Cognitive Competence was not significant (Proctor & Choi, 1994).

A 4 x 2 factorial analysis of covariance (ANCOVA) was used to determine whether the change in children's self-esteem from Time 1 to Time 2 varied with ability level and/or gender and revealed a significant effect for gender (F [1,103] = 4.09, $p < .05$), with males demonstrating a larger gain. There were no main effects

for ability level and no interaction effects between gender and ability. The stability of raw scores over time remained mostly stable. Of those who changed, most were in a positive direction; however, more females than males declined and more students from the superior group declined than from other groups (Proctor & Choi, 1994).

Similarly, an ANCOVA was conducted to determine whether the change in perception of competence and general self-esteem from Time 1 to Time 2 was associated with ability level and/or gender. Results revealed a significant effect only for gender, with females having a greater gain than males in physical competence. The stability of raw scores was similar to those of the Piers-Harris Concept Scale for Children-Revised in that most remained stable, the majority that changed were in a positive direction, females declined more than males, and more from the superior ability level declined than other groups. For the cognitive domain equal numbers increased and decreased. Overall Proctor and Choi (1994) found that the majority of children either remained stable or slightly increased in levels of self-esteem and perceived competence. Of those who declined, females were the majority. They concluded that the transition to junior high was not stressful (Proctor & Choi, 1994).

The sample size Proctor and Choi (1994) used for this study was small and limited by geographical location, as well as by ethnicity and socioeconomic status.

Attrition was described as minimal; however, no numbers were reported. Both measures have previously been documented to have good reliability and validity. However, as noted previously the Piers-Harris Children's Self-Concept Scale is not recommended as a measure of global self-esteem, so it is likely the revised version may demonstrate similar concerns. Reliability coefficients for this study were not reported. The procedures appear to fit the design of the study, and the use of the ANCOVA was appropriate in that it reduces the amount of error. One drawback with this study is that only children making the transition were included.

Summary of Global Self-Esteem Current Findings

Overall, the studies reviewed demonstrated no change in self-esteem or a slight increase. Males were repeatedly found to have higher scores than females and were often found to increase in scores, whereas females decreased slightly. Consistency over time remained fairly stable, but declined with longer intervals. Adolescents who are older appear to remain more stable than those who are younger. The transition to junior high was not demonstrated to have a significant impact on scores. Finally, different personality correlates for males and females were demonstrated with high self-esteem for each gender. Males' personality correlates of self-esteem changed with time, whereas female correlates remained similar over time.

Research on Domain Specific Self-Esteem

Initially self-esteem was viewed as a unidimensional construct measured over a variety of domains, each contributing equally to an overall sense of self-esteem. More recently, researchers (Harter, 1990; Marsh, 1987) have argued that self-esteem is multidimensional, and different domains may effect scores differently based on the individual. Hoge and McCarthy (1984) concluded that the "measures made by combining specific dimensions are tapping different self-evaluation realms than measures using content-free statements, though the measures share a common component" (p. 414). Harter (1990) agreed that, when combining evaluations across multiple domains, global self-esteem is not fully captured. Likewise, Rosenberg (1979) suggested that individuals experience a general sense of self-worth in addition to their evaluation of their competence across certain domains. Therefore, researchers have begun to develop measures that assess global self-esteem as well as domain specific self-esteem and to consider the similarities and the differences between the concepts.

The Self-Perception Profile for Adolescents

The Self Perception Profile for Adolescents is the most widely used measure for adolescent domain-related self-esteem. The instrument is composed of nine factor-analytically obtained domains: Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, Job Competence,

Romantic Appeal, Behavioral Conduct, Close Friendship, and Global Self-Worth. Subscales consist of five items scored from 1 (low) to 4 (high), which are then averaged for a subscale score. Harter (1988) has reported reliability coefficients ranging from .74 to .92, as well as adequate content validity. The Self Perception Profile for Adolescents has also demonstrated criterion-related validity (Harter, 1985) and construct validity (Hagborg, 1996). Another strength of this measure is that it assesses both descriptive and evaluative judgments regarding self-esteem (Bogan, 1988). There is also a well-documented version for children that demonstrates similar reliability and validity with six scales: Scholastic Competence, Athletic Competence, Social Acceptance, Behavioral Conduct, Appearance, and Global Self-Worth.

Global and Specific Self-Esteem as Separate Concepts

Hagborg (1993a) utilized the Self-Perception Profile for Adolescents and the Rosenberg Self-Esteem Scale to demonstrate concurrent validity, which would provide evidence of the relationship of the Rosenberg Self-Esteem Scale to global self-esteem, as opposed to specific self-esteem. Thirty participants were randomly drawn (15 boys and 15 girls) from each grade (8-12) in a middle-class school district. The sample was all White and excluded students with educational handicaps.

The correlation between the Rosenberg Self-Esteem Scale and the Self Perception Profile for Adolescents Global Self-Worth subscale was $r = .76$. The Rosenberg Self-Esteem Scale (+) and Rosenberg Self-Esteem Scale (-) factors compared to the Global Self-Worth subscale were $r = .72$ and $r = .66$ respectively. Correlations between the other subscales of the Self Perception Profile for Adolescents and the Rosenberg Self-Esteem Scale ranged from $r = .15$ to $r = .55$. Cross validation multiple regression analyses were completed and determined that the Global self-worth subscale accounted for 56% of the variance. An ANOVA demonstrated only main effects for gender, $F(1,140) = 5.71$, $p < .02$, with males scoring higher than females. These results suggest that measures of global self-esteem assess a different construct than measures of specific self-esteem (Hagborg, 1993a).

In an effort to further differentiate global and domain specific self-esteem, Rosenberg, Schooler, Schoenbach, and Rosenberg (1995) hypothesized that domain specific self-esteem is a better predictor of behavioral outcomes than global self-esteem and that the reverse would be true for predicting psychological well-being. They used data taken from the Youth in Transition study (Bachman, 1970), which was a longitudinal study of 2,213 tenth-grade boys from 87 high schools in 48 different states. There were four waves to the 8-year study. Included

in the current study were data from the first two waves beginning in 1966 and 1968.

Global self-esteem was measured using 6 of the 10 items on the Rosenberg Self-Esteem Scale. The specific self-esteem chosen for examination was academics and was measured using Bachman's (1970) School Ability Self-Concept Index. To measure a behavioral outcome, they chose school marks and used participants self-reported grade point averages. They also used Bachman's (1970) ten different psychological well-being measures (e.g., depression, anxiety, happiness; Rosenberg, et al., 1995).

Correlations were computed between the psychological well-being measures and both the measure of global self-esteem and specific self-esteem, and significant effects were apparent. The average correlation of psychological measures with global self-esteem was $\underline{r} = .337$. The average correlation of psychological measures with academic self-esteem was $\underline{r} = .079$. Correlations computed for school marks and global self-esteem and academic self-esteem were $\underline{r} = .259$ and $\underline{r} = .488$, respectively. The patterns displayed in these correlations suggest that the strength of the relationship increases when the correct measure of self-esteem is matched with the behavioral outcome or measure of psychological well-being (Rosenberg, et al., 1995).

Next multiple regression of both types of self-esteem on both types of outcomes were conducted and revealed that the effect of global self-esteem on behavioral outcome was mediated by its effect on academic self-esteem. The relationship of specific self-esteem to psychological well-being was too weak to test. Using structural equation modeling procedures and panel data sets, they examined the reciprocal effects of academic self-esteem and global self-esteem. The data fit reasonably well with chi-square/degrees of freedom ratio of 4.05 which demonstrated "that global self-esteem and academic self-esteem affect one another significantly, but that academic self-esteem has a more powerful effect on global self-esteem than the other way around (.21 vs. .11). Both effects are significant at the $p < .05$ level" (p. 149). They also found that more specific forms of self-esteem (e.g., intelligence) had greater effects on more global forms of self-esteem, more so than more global forms of self-esteem, having an effect on more specific self-esteem (Rosenberg, et al., 1995).

What role personal value of a specific self-esteem influences on global self-esteem was examined by dividing participants into two groups, based on mid-point range of valued academic performance and then reanalyzing reciprocal effects. The reciprocal effects between global self-esteem and academic self-esteem were significant only for the high-value group. The magnitude of the effect

of academic self-esteem on global self-esteem was more than three times greater for those who highly valued academic performance (Rosenberg, et al., 1995).

The level of specific self-esteem or global self-esteem effects was examined to determine the degree to which the relevant area of functioning is valued. They found no significant effects. Finally they wanted to determine if grades influence academic self-esteem or vice versa. The analysis of reciprocal effects demonstrated that the effects were approximately equal (.27 grades on self-esteem, .30 self-esteem on grades). This analysis suggested that raising the academic self-esteem or self-estimates of intelligence may increase performance however; raising global self-esteem would not influence grades (Rosenberg, et al., 1995).

Rosenberg et al. (1995) concluded that global and specific self-esteem are not equivalent nor interchangeable and have different correlates (i.e., psychological well-being and behavioral outcomes). Further global self-esteem and specific self-esteem mediate the effects of each other with more specific forms of self-esteem having a greater effect on global self-esteem rather than the reverse. Also, the effect of specific self-esteem on global self-esteem may be affected by the degree to which the behavior is valued, so that school marks effect self-esteem at all levels but global self-esteem has little effect on school marks.

One concern with the research, conducted by Rosenberg et al. (1995), is that the data were from the 1960s and limited to boys. However, it appears to be very representative of the general population. Also, the Rosenberg Self-Esteem Scale was limited to 6, rather than 10, items, which may have influenced reliability. Another limitation is that the only specific self-esteem measured was academic self-esteem, and other domains may demonstrate different results. However, the results of this study and the strategies used for assessing reciprocal influences provided important information about influences of self-esteem on specific behavior, especially in today's era of attempting to improve self-esteem to influence academic achievement.

Specific Self-Esteem With Regard to Age and Gender

To further understand specific self-esteem development, Hagborg (1993b), using previous data (Hagborg, 1993a), examined gender and grade level differences on the Self-Perception Profile for Adolescent's subscales, the relative contribution of subscales to global self-worth, and across domain comparisons for each gender. A 2 (gender) x 5 (grade) ANOVA demonstrated significant effects for gender (Rao's R (9,132) = 5.37, $p < .01$) and for the interaction of gender x grade (Rao's R (36,496) = 1.51, $p < .05$).

Follow-up univariate ANOVAs for gender demonstrated a significantly higher score for boys on Athletic Competence and Physical Appearance ($p < .001$)

and a higher score for girls on Close Friendship ($p < .001$). Furthermore, to understand the "relative contribution of these subscales to gender differences, post hoc standard discriminant function coefficients were computed," and Close Friendship (.704) was the highest followed by Athletic Competence (.496) and then Physical Appearance (.390). Given that the interaction effects came from small sample sizes Hagborg did not attempt to interpret them (Hagborg, 1993b).

In regard to subscales relating to global self-worth Hagborg (1993) computed correlations and regressions to determine the unique variance offered by each subscale. Most subscales (except behavior control for either gender) were correlated with global self-worth ($p < .05$). For boys, the highest contributors of unique variance were Physical Appearance (10%) and Scholastic Competence (8%). For girls, the highest contributors were Scholastic Competence (13%), Physical Appearance (9%), and Social Acceptance (6%).

To determine the across domain comparison, ANOVAs with repeated measures were completed, using the subscales as the repeated measures. Significant effects were found for both boys (F [8,592] = 10.82, $p < .001$) and girls (F [8,592] = 29.17, $p < .001$). Using Tukey HSD planned comparisons, he found critical values and then rank ordered the subscales from highest to lowest. He found that for both boys and girls the highest four subscales significantly differed from the lowest three. The highest subscale groups, demonstrating

confidence among students, included Close Friendship, Social Acceptance, and Job Competence, and their lower scales demonstrating, less self-assuredness, included Romantic appeal and Physical appearance (Hagborg, 1993b).

In summary, Hagborg (1993b) found gender differences for subscale contribution to global self-esteem and that the ranking of subscales importance were similar for gender. One concern with this study, however, is that groups had only 15 participants, which made interpretation of interaction effects difficult. Furthermore, the participants lacked diversity, both ethnically as well as academically, which may lead to different results for more diverse populations. Cross-sectional data were used that may have missed changes in the groups across time. Also, Hagborg did not specify if any groups made transitions.

In a similar study with longitudinal data, Bolognini, Plancherel, Bettschart, and Halfon (1996) measured self-esteem of 219 (111 females) French-speaking adolescents in Switzerland, as well as mental health and social support. Participants were evaluated at age 12, 13, and 14 years during school time. Self-esteem was evaluated using the Self-Perception Profile for Children, which had been validated and translated into French at Time 1 (age 12 years) and Time 3 (age 14 years). Social support was measured by Social Support Appraisals (Vaux, Philipps, Holly, Thomson, Williams, & Stewart, 1986). This, too, was translated

into French and validated. Mental health was measured by a questionnaire that assessed anxiety, sleep, and depressive mood.

An ANOVA was done to assess the effects of time and gender on each self-esteem scale. For Self-Worth there was a gender effect ($p < .05$), with boys scoring significantly higher than the girls. Boys also scored significantly higher on scores of Appearance ($p < .001$). Ratings for Appearance ($p < .05$) and Social Competence ($p < .01$) significantly decreased with time. Scholastic Performance scores significantly increased ($p < .01$). There was a significant interaction effect in regard to Athletic self-esteem, girls at age 12 years scored lower than boys at the same age. There were no significant effects for time for Self-Worth, Athletic Competence and Behavior. Moreover, Behavior was not different for gender (Bolognini et al., 1996).

Factor analysis was used to evaluate the relationship between subscale and gender. For girls, one single factor was derived that remained stable over time. For boys, two factors were derived and were ordered differently from Time 1 to Time 2. At Time 1, Behavior and Scholastic Competence came first followed by Social, Athletic Competence and Appearance. At Time 2, the order of factors were reversed (Bolognini et al., 1996).

Significant correlations ($p < .05$) were found between all subscales and depressive mood except for 12-year-old boys and Athletic Competence. For

anxiety and the subscales, the findings were similar with fewer correlations ($p < .05$), yet including Self-Worth. Participants were then categorized according to their mean change on Self-Worth as either, increase, decrease, or unchanged. Participants with decreased self-esteem demonstrated significantly ($p = .05$) higher mean scores for depressive mood for all subscales (Bolognini et al., 1996).

Path analysis was completed separately for boys and girls and demonstrated that there was a greater relationship among all subscales for girls than boys. Peer self-esteem domains had more effect on Self-Worth and depressive mood than Family Self-Esteem domains. Also, the direct effect of Self-Worth had much less influence on depressive mood in boys than girls (Bolognini et al., 1996).

In summary, Bolognini et al. (1996) found global self-esteem did not change; however, specific self-esteem scores did change. They found that girls had lower Self-Worth, Appearance, and Athletic scores. Further, girls various domains emerged in a single factor, whereas boys domains emerged in two factors. Finally they determined self-esteem was related to mental health and that perceived social support had an important influence on self-esteem.

The research conducted by Bolognini et al. (1996) does come with some concerns and limitations. No attrition rates were reported for this study, and their impact on findings is undetermined. Furthermore, in regard to generalizability,

while the sample size was large, little demographical information was provided regarding the participants. The measures selected were appropriate and are reliable measures; however, no internal consistencies were reported on any measure during the current study. Mental health was measured three times; however, the authors did not specify which times were correlated with self-esteem. Likewise, it was not specified when social support was measured.

Specific Self-Esteem With Regard to Transitions

In a large study (N = 2,890 students) in Northern Ireland, Cairns, McWhirter, Duffy, and Barry (1990) examined the stability of various aspects of self concept and locus of control over time in groups of varying situational change. They also wanted to examine the possibility of changes in the centrality of these various aspects in relation to overall self-esteem.

Participants, in April 1984 and then again in October/November 1985 completed the Harter (1982) Perceived Competence Scale for Children (alpha = .70 - .83) and the Nowicki-Strickland Locus of Control Scale (alpha = .62 to .68). In between Time 1 and Time 2 and again at Time 2 a record was obtained regarding current school or economic activity. The attrition rate included 400 participants due to missing data or not completing Time 2 testing. Test-retest correlations range from .46 to .67 on all measures (Cairns et al., 1990).

To explore these modest correlations, they divided the large group into six smaller groups. Females and males who remained in the same school from Time 1 to Time 2 (297 females, 151 males, r = .48 to .77). Females and males who remained in school but changed school (207 females, 96 males, r = .36 to .74), and females and males who left school and were in full-time employment (148 females, 166 males, r = .31 to .59). These results suggested more stability for those who stayed in school (Cairns et al., 1990).

Repeated measures ANOVAs were carried out, and overall self-esteem revealed a significant effect for time (F [1,1068] = 36.73, $p < .000$) as well as a main effect for gender (F [1,1068] = 52.51, $p < .000$). Scores increased with time, and males consistently scored higher than females. On Athletic Competence, males scored significantly higher ($p < .000$). For social Competence, scores increased significantly at the second testing ($p < .001$). For Cognitive Competence, those groups that remained in the same school scored higher than those who changed schools who scored higher than those who left school ($p <$ .000). There was also a gender by time interaction in Cognitive Competence with girls scoring higher at the second testing (Cairns et al., 1990).

Locus of control results demonstrated that those who stayed in the same school were more internally oriented than those who changed schools. Similarly, those who changed schools were more internally oriented than those who left

school. There was also an interaction in that females who left school or changed schools were more externally oriented than males who made the same transition (Cairns et al., 1990).

Stepwise multiple regression analyses showed that both boys groups remaining in school increased in the amount of variance accounted for in self-worth scores (same school group increased from 26% to 47%, changed school group increased from 44% to 53%). Girls who left school decreased from 32% to 23% in variance accounted for. Overall, the social and cognitive subscales were the major predictors of self-esteem, except for employed girls at Time 2, for which the social subscale was the best predictor (Cairns et al., 1990).

In summary, Cairns et al. (1990) found, all scores except the athletic subscale showed an increase with time. The results showed slightly more stability for those who did not change schools or leave school and demonstrated a positive change. This study provided cross-cultural support for the Harter Scale and provided information about how transitions may impact self-esteem at different ages. They were also able to demonstrate results for groups who had made different types of transitions or no transition at all. This study had a large number of participants with an attrition rate of only 13%. In the process of subgroup identification, however, 1,000 participants were not placed in a subgroup, and no explanation was provided. A final concern with this study is that the measure they

used had since been updated with additional subscales for adolescents, which may have demonstrated different results from this previous test which was revised.

In another study on transitions, Wigfield, Eccles, Mac Iver, Reuman, and Midgley (1991) chose to "examine the change across the junior high school transition in young adolescents' general self-esteem as well as changes in their self-concepts of competence and liking for mathematics, English, social actives, and sports activities" (p. 553). They predicted different patterns of change for general self-esteem and specific self-perceptions. They also made multiple predictions regarding changes in self-concepts of competence and liking for different domains. Finally, they wanted to assess how gender and level of math ability affected the pattern of change in self-perceptions.

The data used were from the Michigan Adolescence Project. This study had a 7-year design and included twelve school districts located in southeastern Michigan. Nearly 90% of the participants were Caucasian. The current study utilized data from the first 2 years of the original study. Participants ($\underline{N}$ = 1,850) completed questionnaires in the fall (Wave 1) and spring (Wave 2) of Year 1 and the fall and spring (Wave 3 and 4) of Year 2 to allow for within-year and across-year changes. There was a 14% attrition rate between years 1 and 2, primarily because students moved from the district (Wigfield et al., 1991).

The three dependent variables in the study were general self-worth, perceived self-competence, and liking of activities. To measure general self-worth, Harter's (1982) General Self Worth subscale was used from the Perceived Competence Scale for Children. To measure perceived self-competence, students were asked two questions (scored 1-7) in each domain and scores were averaged (alpha = .60 to .90, most above .78). To measure how much a student liked an activity, they were asked to rate each domain on a scale of 1-7. The majority of correlations (ranging from .07 - .45) among dependent measures were significant ($p < .01$) at each testing period. Math ability was measured by the sixth-grade teachers' ratings for natural talent and relative performance and formed three groups (high, average, and low ability; Wigfield et al., 1991).

Self-esteem effects were analyzed using a 3 (math ability) x 2 (gender) x 4 (time of measurement) MANOVA. Time of measurement was significant ($F[3,1671] = 29.54$, $p < .001$) with change showing a significant cubic trend ($F[1,1673] = 11.60$, $p < .001$). Post Hoc tests demonstrated that Wave 3 was significantly lower than all others and that Wave 2 was significantly higher than Wave 4. The effect for math ability demonstrated students with higher math abilities had higher self-esteem. There was also an effect for gender at all four waves with boys demonstrating higher self-esteem than girls ($p < .001$; Wigfield et al., 1991).

In self-concept competency, a 3 (math ability) x 4 (activity domain) x 4 (time of measurement) MANOVA was computed. The activity domain by time of measurement interaction was significant suggesting the pattern of change in self-concept differed across time and domain. Math and English scores were similar at Wave 1 and Wave 2 and then decreased at Wave 3 and Wave 4. Post hoc tests demonstrated significant effects ($p < .01$) for English, Wave 1 and Wave 2 were significantly higher than Wave 3 and Wave 4. In the social domain, post hoc tests demonstrated a significant decrease between Wave 2 and Wave 3. Also, measures demonstrated that both spring waves were higher for the social domain than their corresponding fall waves. In the sports domain, post hoc test demonstrated a decline from Wave 1 to Wave 3. The interaction between math ability and activity domain competence was significant and demonstrated high math ability was significantly higher than average or low math ability in math and English (Wigfield et al., 1991).

Boys and girls differed significantly in self-concept across domains, with boys having higher math and sports competence perceptions than girls and girls having higher English scores than boys. Social competence perceptions did not differ. Post hoc tests on the three-way interaction showed that boys and girls social competence perceptions were significantly higher at Wave 2 than any other time. In liking different domains post hoc test indicated students liked social

activities and sports more than math and English with different patterns over time. Further, boys liked sports more than girls and girls liked social activities and English more than boys (Wigfield et al., 1991).

Overall, the research conducted by Wigfield et al. (1991) demonstrated that global self-esteem was affected by the transition. Furthermore, domain specific activities became more negative after the transition. Boys consistently reported higher self-esteem at all four waves and demonstrated higher scores in Math and sports competence. Girls scored higher in perceived social competence. Students rated with higher math ability had higher self-esteem. Boys and girls appeared to prefer social and sport domains over math and English domains.

Wigfield et al. (1991) used a good sample of Caucasian adolescents with a low attrition rate; however, more ethnic diversity would have been helpful for generalizability. Another concern is the measure of perceived ability was determined on only two items which may not be reliable over repeated testing. The Harter Global Self-Worth scale is an appropriate measure for global self-esteem. By measuring two times before the transition, and two times after the transition, they were able to identify changes others had not found. They also used appropriate statistics with good significance levels.

Specific Self-Esteem and Contributing Beliefs

Tashakkori (1993) conducted a study with 229 African-American (146 males) and 338 White (168 males) seventh and eighth-graders in two small southern towns. Tashakkori hypothesized that the structure of self-belief that underlies self-esteem is different across ethnic and gender boundaries. To measure self-esteem, the author used five items from the Rosenberg Self-Esteem Scale (r = .60). To measure self belief, components (specific domains) from a modified version of the Self-Description Questionnaire were used (those items which had the highest factor loadings on each of the two academic and four nonacademic factors) along with two parallel subscales, each with four items which were developed to measure the academic areas of social studies and science. The full scale included 32 items covering four academic and four nonacademic dimensions. The author reported that a principal components analysis indicated the items were grouped as predicted. The overall alpha was .87, and the individual dimensions ranged from .66 to .88 with six over .80.

To measure competence, seven self-beliefs were taken from previous work completed by the author (r = .70). Finally, beliefs regarding self-efficacy and self-control were measured (each based on three items), plus a one-item powerlessness indicator, and a one-item unpopularity indicator was included. All items were randomly mixed and presented in a questionnaire with available answers ranging

from always true to always false. Participants received a score for competence, self-efficacy, perceived control, popularity, and powerlessness (Tashakkori, 1993).

These scores along with the eight domain scales were correlated with self-esteem. The highest correlation was for competence ($r = .50$, $p < .01$) in the overall sample as well as in subgroups based on gender and ethnicity. The second highest correlation for the overall group was appearance ($r = .45$, $p < .01$). However, following Competence, different subgroups demonstrated different orders of significant correlations suggesting different component beliefs contribute to individual levels of self-esteem. To explore this further, regression analyses and stepwise regression analyses were determined; all were significant ($p < .01$) and ranged from .26 to .44. African-American males had the lowest prediction scores, and Caucasian girls had the highest prediction scores (Tashakkori, 1993).

Findings suggested different self-esteem structure according to ethnicity and gender and that adolescents did not assign equal weight to different self-belief components to reach an overall evaluation of themselves. However, competence was the most influential predictor of self-esteem for all groups. Self-beliefs about science, math, and social studies did not appear to be as important as beliefs about

peer relationships popularity, appearance, and physical strength (Tashakkori, 1993).

The sample size Tashakkori (1993) collected was appropriate for the measures used; however, a larger number of participants would have allowed for correlations to be determined in regard to grade. As it was, no grade effects were reported. In the measures chosen, the reliability of having a one-item scale will probably not continue to be consistent. The design used in this study allowed for the demonstration that global self-esteem is based on the individual's own self-esteem structure which may or may not be similar to others.

Summary of Domain Specific Self-Esteem Current Findings

Overall, the findings indicate that global self-worth scores were influenced by transitions, more so when adolescents were younger rather than older. Similarly, late adolescence scores were more stable than early or middle adolescence scores. Males consistently scored higher than females on global self-worth. In relation to specific self-esteem, males scored higher on scales reflecting physical appearance, athletic competence, and specifically for math (not necessarily scholastic competence). Females scored higher in domains such as close friendship (not necessarily social competence) and English. Scores tended to increase for scholastic competence and cognitive competence over time. In middle

adolescence, athletic performance and social competence decreased slightly. By late adolescence all self-esteem scores increased.

The physical, scholastic, and social domains were higher predictors of global self-esteem than other domains tested. Moreover, gender and ethnic differences were found for subscale correlations to global self-esteem. General Competence was determined to be an important predictor of self-esteem and academic concepts did not appear to be as important as non-academic concepts. It was also determined that global and specific self-esteem have different correlates, yet mediate the effects of each other. Furthermore, valued domains influence global self-esteem more than global self-esteem influences valued domains.

Research on Identifying Self-Esteem Trajectories

As demonstrated in the aforementioned studies, adolescent self-esteem has traditionally been analyzed by comparing average group means over time or by considering the change in the rank ordering of participants. These types of methodologies consider differences in the group rather than changes in the individual. Hirsch and DuBois (1991) suggested the problem with this is that different theories of self-esteem development are then accepted or rejected based on how they explain the group as a whole. Furthermore, "by focusing on changes in mean levels of self-esteem in the entire sample, we in effect ignore subgroups

that differ substantially from this mean, subgroups that together may well contain a majority of subjects. We might better understand changes in self-esteem if our goal becomes to apportion the number of adolescents who are best captured by each model" (p. 55). Therefore, rather than discarding a previous theory for one that appears to have current support, the notion should be considered that perhaps adolescents as individuals fit into different self-esteem categories such that different theories better describe different subgroups of adolescents.

In an effort to identify subgroups of adolescents and their self-esteem trajectories, Hirsch and DuBois (1991) completed a 2-year longitudinal study that took place in a Midwestern university community. The students were from one school district and included socioeconomic status variation from working class to upper-middle class. Specifics on socioeconomic status for each student were not obtained. Data were collected at the end of sixth grade, the middle of seventh grade, the end of seventh grade, and the end of eighth grade. Data from students who did not complete all four times were excluded from the main analysis (N = 128; 57 males, 34 African-Americans). Those who did not complete all four testing times did not significantly differ from those who did complete the study.

To measure global self-esteem, Hirsch and DuBois (1991) used the Rosenberg Self-Esteem Scale. To measure peer support, a 12-item self-report scale was used to assess students' perceptions of having a supportive peer social

network. This scale was noted to have acceptable internal consistency as well as previous documentation supporting its relation to measures of adolescent self-esteem and psychological symptomology. A Quality of School Life self-report scale was used to measure satisfaction with school, commitment to doing school work, and reactions to teachers. This scale was noted to have good internal homogeneity and previous documentation supporting its relevance to the topic. The Comprehensive Tests of Basic Skills, Form S, was used to identify a battery scale testing academic competence. This test was noted to have high internal consistency and a correlation with IQ.

The Child-Behavior Rating Scale was given to teachers to complete and had six factorially derived subscales. The Brief Symptom Inventory was used which includes scales measuring 9 symptom dimensions. It was noted to have good convergent and discriminant validity with other self-report inventories, and the scales demonstrate adequate stability and internal consistency in adolescent samples. The self-esteem measure was significantly correlated between the times measured ($p < .001$); however, the variance accounted for was consistently less than 40%. A k-means clustering algorithm was used to identify students who had contrasting self-esteem clusters across the four times of measurement. After determining that a four-cluster solution best fit the data they applied a repeated-measures ANOVA with self-esteem scores at each of the four time points. They

found the clusters were significantly different in their overall level of self-esteem (F [3,124] = 194.56, $p < .001$) and in their pattern of self-esteem change across time (F [9,297] = 12.32, $p < .001$). They also determined that the four clusters accounted for approximately 60% of the variance in self-esteem at the four time points. The four clusters were labeled consistently high for those consistently well above the mean, chronically low for those below the mean, and steep decline or small increase for those who scores advanced across the mean (Hirsch & DuBois, 1991).

The trajectories were then compared with the other measures. Students in the consistently high trajectory had the highest scores on peer support, quality of school life, and academic competence compared to the chronically low group who reported the lowest scores. The small increase trajectory had mid-range results as did the steeply declining trajectory. Regarding peer support, the repeated measure ANOVA revealed a significant difference between clusters in pattern of change over time regarding peer support. The steep decline group demonstrated a significant decline in peer support whereas the others had little change. There were no significant cluster by time interactions found for quality of school life (Hirsch & Dubois, 1991).

A MANOVA revealed a significant difference between clusters on psychological symptoms from the BSI (Hotelling's $T^2 = 95.6$, $p < .001$). The

consistently high group reported the fewest psychological symptoms of any group, and the chronically low group had the most psychological symptoms of any group. The steep decline trajectory significantly differed from the consistently high trajectory in psychological symptoms and reported more somatic, obsessive compulsive, and depressive symptoms. The steep decline group increased from the 60th percentile at Time 1 to the 80th percentile at Time 4. Likewise, the chronically low group went from the 85th percentile to the 94th percentile (Hirsch & DuBois, 1991).

A discriminant function analysis was performed to determine which factors would predict the group membership status of participants based on a single testing time. One significant function was obtained (canonical $\underline{R} = .48$) with the most powerful multivariate discriminator being the weighted addition of academic competence, satisfaction with school, and peer support, with peer support making the largest contribution. This variable set only discriminated significantly ($\underline{p} < .05$) the chronically low group from the others (Hirsch & DuBois, 1991).

In summary, the consistently high and chronically low groups remained somewhat stable over time. However, the chronically low group demonstrated an increase in depressive symptomology suggesting a deterioration in their well-being. The small increase group demonstrated positive growth while the steep decline group had a dramatic decrease in self-esteem scores, with a reduced

amount of peer support and an increased level of depressive symptomology (Hirsch & DuBois, 1991).

Similar to Hirsch and DuBois (1991), Deihl, Vicary, and Deike (1997) utilized cluster analysis to examine differences in self-esteem change. They expected to find the same four longitudinal trajectories with a rural population and anticipated that a higher number of rural adolescents compared to suburban adolescents would cluster in the chronically low or steep decline groups. They also predicted that clusters would differ on peer and family relationship, positive emotional tone, and satisfaction with school. Emotional tone was defined as a "general experience of pleasure or depression and anxiety" (p. 399).

Data were obtained from a longitudinal study of rural adolescent development. The sample included participants from a northeastern rural Appalachian, resource-poor community. Socioeconomic status was low to lower middle class with high parental unemployment. Most were Caucasian. All but 5% of the students in the seventh grade of the district's two junior high schools were surveyed in the early fall annually for 5 years with permission from parents and school officials. Students who moved or left school continued to be surveyed by mail. Analysis showed no significant difference for in school and out of school participants on demographic variables. Two hundred fifteen students began the

study. Complete longitudinal data were available for 142 at the end of the study (77 males; Deihl et al, 1997).

To measure self-esteem, they used the Rosenberg Self-Esteem Scale (alpha = .85 to .91). Three subscales of the Self-Image Questionnaire for Young Adolescents were used to measure peer relationships, family relationships, and emotional tone with internal consistency reliabilities of .82 to .86, .89 to .93, and .89 to .91, respectively. Problem behaviors were measured with the Primary Prevention Awareness, Attitudes, and Usage Scale (r = .66 to .88). Finally, satisfaction with school was measured using a 5-point scale and self-reported grades were measured along a 10-point scale (Deihl et al, 1997).

Measurement of self-esteem over the four time periods significantly correlated ($p < .001$), accounting for less than 50% of the variance. Overall self-esteem showed a significant increase with time (F [3,417] = 3.05, $p < .05$). A k-means cluster analysis resulted in a three-cluster solution which accounted for 58% of the total variance. An ANOVA demonstrated the clusters were significant in overall level of self-esteem, (F [2,139] = 339.72, $p < .001$) and pattern of change over time (F [6,417] = 2.14, $p < .03$). A MANOVA was used to assess the relations of self-esteem with gender, family and peer relationships, emotional tone, problem behaviors, satisfaction with school, and grades as dependent variables. The clusters were significantly different in regards to the pooled group

of dependent variables ($p < .001$). Univariate results demonstrated significant differences for peer relationships (F [2,135] = 34.84, $p < .001$), family relationships (F [2,125] = 32.54, $p < .001$), and emotional tone, (F [2,135] = 51.87, $p < .001$). There were no significant differences for gender, minor deviant behaviors, satisfaction with school, or grades (Deihl et al., 1997).

In summary, the consistently high cluster demonstrated a small rise in self-esteem, had more positive peer and family relationships, and reported the most positive affect. The small increase group maintained moderate levels across the variables. The chronically low group demonstrated a small decline in self-esteem, appeared most vulnerable to negative outcomes, had less positive peer and family relationships, and reported the most negative affect (Deihl et al., 1997).

In 1997, Zimmerman, Copeland, Shope, and Dielman also desired to replicate and build on the findings reported by Hirsch and DuBois (1991). They used a larger and more representative sample and continued the study for a longer period of time to determine if different trajectories reported different responses to peer influence, school performance, and behavior problems. Their hypotheses were that youth with high self-esteem would respond less to peer pressure, have better grades, and engage in less problematic behaviors than those who had declining or low self-esteem.

The data used were from the Michigan Adolescence Project (previously described). Testing took place at the end of sixth, seventh, and eighth grade and again at the beginning of tenth grade. Funding problems did not allow for testing to take place at the end of ninth grade. Questionnaires included demographic information, alcohol use and misuse, self-esteem, susceptibility to peer pressure, grades, and tolerance for deviance. The original sample included 2,511 students. However, missing a year or moving from the district resulted in a consistent 4 year sample size of 1,160 (160 African Americans, 957 Caucasians, 585 males). All students experienced a transition from elementary to junior high and a transition from junior to senior high (Zimmerman et al., 1997).

To measure self-esteem a shortened version of Coopersmith's Self-Esteem Inventory was used that was previously documented to represent the original scale in that factor analysis demonstrated four domains: global, school, peers, and family (r =.73 to .77). As noted previously a more appropriate use of the Self-Esteem Inventory would have been to use factor scores rather than the overall score. Susceptibility to peer pressure was measured using measures established in previous research (alphas for grades 6, 7, 8, and 10 = .79, .84, .82, and .79, respectively; Zimmerman et al., 1997).

School grades were based on a self category selection ranging from mostly As to mostly Fs, with various combinations in between. Alcohol use was

measured with a composite index for use of beer, wine, and hard liquor. Alcohol misuse was determined by a Likert scale developed by previous researchers to assess problems that youth experience as a result of drinking (alphas = .67, .68, .73, and .79 for Grades 6-10, respectively). Tolerance for deviance was assessed using a previously documented instrument which specifies a judgment that deviant behaviors are wrong. (alphas =.74, .80, .83, and .82 for Grades 6 – 10, respectively; Zimmerman et al., 1997).

Analysis of participant attrition found no significant difference for gender or race. However, participants who did not complete the study demonstrated significantly more alcohol use, alcohol misuse, susceptibility to peer pressure, and tolerance for deviance ($p < .01$) than those who remained in the study beyond the sixth grade. Furthermore, these students reported a lower self-esteem ($t = 5.51$, $p < .01$). Cluster analysis, according to Ward's method, was used along with randomly dividing the sample to cross validate cluster solutions, which resulted in two similar four group cluster solutions. Then the total sample was clustered using the subsample centroids to establish weighted averages. When the total sample was clustered, the same four groups emerged with an 81% agreement between the matched and the split sample. One group had consistently high self-esteem (41%), one group had moderate and rising self-esteem (19%), one group had steadily decreasing self-esteem (20%), and the fourth group had consistently low self-

esteem (20%). For the entire sample, self-esteem decreased from the sixth to tenth grades ($t = 14.87$, $p < .01$; Zimmerman et al., 1997).

Chi-square determined no significant difference for gender according to cluster; however there was a significant difference in regard to gender (x^2 [3,1103] = 27.94, $p < .01$). More males than were expected were in the moderate and rising self-esteem group, and more females than were expected were in the steadily decreasing group. Therefore, subsequent analyses included a gender by trajectory factorial design (Zimmerman et al., 1997).

Finally, a repeated-measures MANOVA (with post hoc comparisons) examined main effects for cluster, gender, time, two-way interactions of cluster and gender by time, and three-way interactions of cluster by gender by time. Cluster (F [3,1084] = 30.40, $p < .01$) and time (F [3,3252 = 429.62, $p < .01$) main effects were found, as well as a self-esteem by time interaction (F [9,3252] = 6.97, $p < .01$). These results demonstrated that adolescents in the consistently high and moderate and rising groups reported less susceptibility to peer pressure over time than youth with consistently low or steadily decreasing self-esteem. Also, the rate of change for susceptibility to peer pressure was the lowest for youth in the moderate and rising group (Zimmerman et al., 1997).

Grades demonstrated main effects for cluster (F [3,993] = 43.22, $p < .01$) and time (F [3,2979] = 34.54, $p < .01$) as well as a self-esteem group by time

interaction (F [9,2979] = 5.37, $p < .01$). All groups decreased through the eighth grade; however the steadily decreasing group also reported the greatest decrease in grades over time. The consistently high group had the highest grades as well as the smallest decline in grades over time (Zimmerman et al., 1997).

Participants in the consistently high and moderate and rising groups reported less tolerance for deviance, alcohol use, and alcohol misuse over time than youth with consistently low or steadily decreasing self-esteem. The consistently high group reported the lowest levels of each of these measures. Males and females differed in regard to alcohol use. Males in the steadily decreasing group used significantly more than males in the consistently high group, whereas females from both groups were similar. For consistently low and steadily decreasing groups males significantly increased use in grade 8, and girls in these groups increased use in grade 10 (Zimmerman et al., 1997).

In summary, youth in the consistently high reported less susceptibility to peer pressure over time, reported the highest grades, and the lowest levels of alcohol use, alcohol misuse, and tolerance for deviance. Youth with consistently low or steadily decreasing self-esteem were more susceptible to peer pressure, had poorer or more rapidly declining grades, higher scores for alcohol use, alcohol misuse, and tolerance for deviance. More females reported decreasing self-esteem,

and more males reported increasing self-esteem. Alcohol use was also different for gender, time, and trajectory (Zimmerman et al., 1997).

The studies conducted by Hirsch and DuBois, (1991), Zimmerman et al. (1997), and Deihl et al. (1997) have numerous strengths. All had adequate sample sizes and clearly defined the research sample. The use of the Rosenberg Self-Esteem Scale to measure self-esteem was appropriate. However, use of Coopersmith's Self-Esteem Inventory was questionable. Furthermore, all other measures that were employed had demonstrated internal reliability as well as documentation of previous use and validity.

Attrition rates of participants were analyzed and reported. By choosing to use cluster analyses, scores that might have been otherwise obscured or balanced out by contrasting scores were noticed, and individual variation in self-esteem development could be identified. The use of the k-means clustering algorithm, as well as Ward's method, were appropriate in that both methods are sensitive to outliers or atypical patterns. Once trajectories were identified, appropriate statistics were used to demonstrate significant differences between trajectories. Identifying trajectories also accounted for a greater amount of variance (Deihl et al., 1997; Hirsch & DuBois, 1991; Zimmerman et al., 1997).

These studies demonstrated the importance of family as well as peers in adolescence. Furthermore, they showed a relationship between self-esteem and

peer pressure, grades, alcohol use, attitudes towards deviance, and mental health. They also increased our understanding of gender differences. Finally, their research opens the door for new ways to understand and conceptualize adolescent development as well as generate further questions and provide direction for future research (Deihl et al., 1997; Hirsch & DuBois, 1991; Zimmerman et al., 1997).

These studies also come with concerns and limitations. Deihl et al. (1997) and Zimmerman et al. (1997) both used data that were collected in the 1980s and that may reflect some differences from the current population of adolescents regarding self-esteem. Second, the generalizability of these studies is somewhat limited by ethnicity, socioeconomic status, and geographical location. These studies also carry the burden of self-report measures. All measures used were based on self-report, including socioeconomic status demographics, alcohol use, and grades. Multiple self-report measures bring into question shared method variance and whether this may impact outcome results. Other means of assessing self-esteem such as peer ratings or adult ratings (Demo, 1985) should be considered to lend further support to their conclusions.

Another concern is that confounding variables such as school transitions may have influenced results. Similarly, in regard to Zimmerman et al. (1997), those participants who dropped out had significantly lower self-esteem than those who completed the study. This attrition variable may have altered the

identification of a certain trajectory or changed the results of the remaining population studied. Finally, even though the accounted for variance increased with a cluster analysis there is still a large amount of unaccounted for variance in explaining self-esteem development.

Applications and Future Directions

Overall the studies supported the notion that the period of adolescence is rather stable in regard to global self-esteem. However, they also demonstrated that for certain adolescent populations (e.g., African-American males, middle-adolescent females), the period of adolescence includes fluctuations in self-esteem scores. These results suggest that both storm and stress theories and stability theories may be valid and contribute to understanding different types of adolescent, so that certain theories better explain different adolescent trajectories.

These studies demonstrated that transitions in early adolescence decrease stability in specific self-esteem, whereas transitions in later adolescence have less impact on self-esteem. This fits with the concept that as adolescents mature, their self-esteem becomes more solidified, and they are better able to manage and negotiate transitions. Due to the fact that earlier transitions earlier may influence specific self-esteem in a negative direction, researchers need to consider the impact of school changes and determine if there are better ways to prepare

students or if other options for the educational system should be considered. Specifically, measuring domain specific self-esteem in students attending middle schools with core teachers should be compared with students in junior high schools that have variable schedules. Likewise, schools that have no transition, or a later transition, such as private schools, should be compared with those that have an earlier transition to determine outcomes. It is important that comparison groups be included in these studies to rule out differences.

Another aspect of self-esteem demonstrated in these articles was the difference in regard to gender. Female self-esteem scores were consistently lower than male self-esteem scores across different measures. Researchers have offered several suggestions for this difference, such as male machismo or narcissism in reporting (Bagley et al., 1997) or perceived role differences (Harper, 1991). Studies evaluating whether this is merely an instrumental difference or a difference in actual level of self-esteem need to be pursued. Research that considers the use of measures other than self report may demonstrate different scores for females and help to understand the male-female discrepancy.

Perhaps an even greater concern is that females demonstrated more decline in scores than males and females in middle adolescence demonstrated lower or declining scores, more so than their female counterparts in earlier or later adolescence. Reasons for this decline in female scores needs to be teased out and

evaluated. It appears, based on the results, that currently something may be lacking or providing an advantage to males and that programming aimed at enhancing self-esteem for young girls needs to be considered.

Furthermore, the fact that different personality correlates are demonstrated with high self-esteem for males and females and that different domains correlate differently based on gender suggest that females and males develop in different ways and these differences need to be identified.

Similar to gender differences is the demonstrated effects for ethnic differences. African-Americans demonstrated different effects when compared with Caucasians. The few studies involving diversity demonstrated that individuals were different in their self-competencies and on how these competencies contributed to overall self-esteem. This is an important finding for psychologist who work with ethnically diverse populations of adolescents. It is also important for individuals who work with inner city populations and are attempting to improve self-esteem. Applying programs that work for Caucasian females may not demonstrate effects for African-American females. Specific influences of different domains need to be further researched and then included in specialized programming.

The findings that global self-esteem and domain specific self-esteem are separate, but related, entities is very important. Furthermore, the notion that

specific self-esteem has been demonstrated to have a greater influence on behavior than global self-esteem is crucial to working with young people. Due to the relationship between global self-esteem and achievement, educators stress the importance of having good self-esteem. However, Rosenberg et al. (1995) demonstrated that improving the self-esteem that is most similar (e.g., Scholastic Competence) is likely to have a greater positive effect. Further studies need to be conducted to extend the findings of Rosenberg and others to determine if this pattern extends across other specific domains. Similarly, their finding that global self-esteem related more to psychological well-being rather than behavior provides important information to psychologists working with adolescents and their families, especially when treating depressive disorders.

The identification of self-esteem trajectories is significant in that it demonstrated that adolescent self-esteem does not follow one pattern of development. Furthermore, some groups are relatively stable whereas other groups are unstable and that different theories may better describe different groups of adolescents. As suggested by Hirsch, DuBois, and Brownell (1993) the identification of self-esteem trajectories provides a new way for identifying at risk groups and to gain understanding into these groups. Moreover, it provides a way to study resiliency groups and how they function. Once these are determined, then appropriate programming can be designed.

Related to these findings is that self-esteem trajectories provide a way to more adequately assess the impact of self-esteem interventions. If trajectories are applied to specific domains, researchers could determine what factors are most influential in enhancing that area of self-esteem and then assess the influence of different interventions. Research into improving the prediction of adolescent trajectories will be very beneficial if identification of declining self-esteem trajectories can be determined.

Finally, the role of the family in self-esteem development needs to be synthesized with adolescent self-esteem research. Future studies need to integrate the influence of the family on self-esteem development as well as the contribution of the family to self-esteem stability. This information could then be utilized to facilitate the role of the family with the community or school based self-esteem enhancement programs.

Conclusion

The improvements of self-esteem research in the past two decades have created many interesting and relevant paths to pursue. Although this paper is by no means an exhaustive review on the current research in adolescent self-esteem development, it has presented recent findings that help to gain an understanding of adolescent global self-esteem and domain specific self-esteem and to determine

what type of change happens, at what time, and what factors influence these processes.

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